

**WHAT IS CLAIMED IS:**

1. An improved electroless copper plating bath composition comprising:
  - a) a source of copper;
  - 5 b) a reducing agent;
  - c) a complexing agent;
  - d) a pH adjuster; and
  - e) a stabilizer selected from the group consisting of formic acid and formate salts.
- 10 2. The improved electroless copper plating bath composition according to claim 1, wherein said plating bath composition is maintained at a temperature above 120°F.
- 15 3. The improved electroless copper plating bath composition according to claim 2, wherein said plating bath composition is maintained at a temperature above 155°F.
- 20 4. The improved electroless copper plating bath composition according to claim 1, wherein said stabilizer is present in said plating bath composition at a concentration of about 5 to about 20 grams/liter.
- 25 5. The improved electroless copper plating bath composition according to claim 3, wherein said stabilizer is present in said plating bath composition at a concentration of about 10 grams/liter.
- 30 6. The improved electroless copper plating bath composition according to claim 1, wherein said plating bath composition is maintained at a pH between 11 and 13.
7. The improved electroless copper plating bath composition according to claim 1, wherein said reducing agent is formaldehyde.
8. The improved electroless copper plating bath composition according to claim 1, wherein said complexing agent is selected from the group consisting of N-hydroxyethyl ethylenediamine triacetic acid and alkali metal salts thereof, ethylenediamine tetraacetic

acid and alkali metal salts thereof, nitrilotriacetic acid and alkali metal salts thereof, and tartates and salts thereof.

9. The improved electroless copper plating bath composition according to claim 1,  
5 wherein said pH adjuster is selected from the group consisting of sodium hydroxide and potassium hydroxide

10. The improved electroless copper plating bath composition according to claim 1,  
10 wherein said source of copper is selected from the group consisting of copper chloride and copper sulfate.

11. The improved electroless copper plating bath composition according to claim 1,  
wherein said formate salt is sodium formate.

15 12. The improved electroless copper plating bath composition according to claim 1,  
wherein said bath is air agitated.

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